

Application No: 10/623,933
Filed: July 21, 2003
Applicant: James C. Smith

ED 848208267 US
EQ 167914688 US

IN THE CLAIMS:

CLAIMS: The following is a listing of all the claims in the application with their status.

Claims 1-17 (CANCELED)

18. (CURRENTLY AMENDED) sealable A wiping cap device for pipette tips, for removing residue fluid attached to the outside surface of said pipette tip, comprising:

a tubular member having an open end and an inner wall;

a wiping cap including a base and a cup shaped member, said wiping cap coupled to said open end of said tubular member, said cup shaped member comprising a conical resilient wiper section, said wiper section getting smaller in the direction away from said open end and being configured to include at least one helically formed slot forming a wiper finger, said wiper finger being adapted to be resiliently held against an element said pipette tip inserted therethrough including means so as to remove outside residue surface fluid when said element pipette tip is withdrawn axially through said wiper finger; opening and

 said wiping cap including means for securing said wiping cap to said tubular member.

19. (CURRENTLY AMENDED) The device of claim 18 wherein said means for securing said wiping cap to said tubular member includes threads formed on the outer wall of said tubular member and mating threads formed on the a threaded skirt attached to and depending from the periphery of said base of said wiping cap.

20. (ORIGINAL) The device of claim 18 wherein said wiping cap between said base and said wiper section of said cup shaped member includes a frustum section adapted for mating with said tubular member so as to form a seal therebetween.

21. (ORIGINAL) The device of claim 18 wherein said wiping cap is configured to receive a locking cap within said cup shaped member so as to form a seal therebetween and sandwich said wiping cap between said locking cap and said tubular member.

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22. (CURRENTLY AMENDED) The device of claim 18 21 wherein said locking cap is fastened to said wiping cap by hinged means, said locking cap includes hingedly secure to said wiping cap with a top section engagable with a portion of said sealing cap, said top portion providing engageable access into said wiping cap.

23. (CURRENTLY AMENDED) The device of claim 18 21 wherein said wiping cap and said locking cap are each coupled to said tubular member by means of a flexible member.

Claims 24-41 (CANCELED)

42. (WITHDRAWN) An improved needle device for use with a sealed container with septum, said needle device comprising:
a tubular member having proximal and distal ends, with an inner wall and an outer wall, a needle having proximal and distal ends, with an inner wall and an outer wall with means for attachment of said needle to said inner wall of said tubular member in the vicinity of said distal end of said tubular member and forming a seal therewith,
a vent channel between said outer wall of said tubular member between said seal and said distal end of said tubular member defining a pre-determined vent channel with means for allowing gas diffusion from inside of said sealed container through said vent channel to outside of said sealed container through at least one pre-determined opening between said vent channel and said outer wall of tubular member when said needle device is inserted into said sealed container.

43. (WITHDRAWN) The device of claim 42 wherein said vent channel prohibits flow of aerosols or fluids therethrough.

44. (WITHDRAWN) The device of claim 42 wherein said outer wall of said tubular member has a flange below said at least one pre-determined opening with means to occlude puncture opening of said septum when needle device is inserted into said sealed container.

45. (WITHDRAWN) The device of claim 42 wherein said proximal end of tubular member contains means for attachment to luer-lok, slip tip or eccentric tip syringes with sealingly means.

46. (WITHDRAWN) The device of claim 42 wherein said needle device is integrally molded as part of a hypodermic syringe.

47. (NEW) A sealable wiping device comprising:
a tubular member having an open end;
a wiping cap including a cup shaped member configured to occlude the open end of said tubular member when said wiping cap is positioned in said open end, said cup shaped member comprising a conical resilient wiper section, said conical shape of said wiper section getting smaller in diameter in the direction away from said open end and being configured to include at least one helically formed slot forming a wiper finger, said wiper finger being adapted to be resiliently held against the outside surface of a pipette tip inserted therethrough, said wiper finger including means to remove residue fluid from said outside surface of said pipette tip when said pipette tip is withdrawn axially through said wiper finger; and
a locking cap configured to be received into said cup shaped member of said wiping cap so as to form a seal therebetween.

48. (NEW) The device of claim 47 wherein said locking cap is configured to sandwich said wiping cap between said locking cap and said tubular member.

49. (NEW) The device of claim 47 wherein said wiping cap and said locking cap are each coupled to said tubular member by means of a flexible hinged member.

50. (NEW) The device of claim 49 wherein said locking cap and said wiping cap are in the sealed locked position within said open end of said tubular member, each said flexible hinged member being configured such that when said locking cap and said wiping cap are locked together, significant movement of said locking cap and said wiping cap is away from said open end of said tubular member, said movement is precluded without deformation of said flexible hinged member of said wiper cap or said locking cap.

51. (NEW) The device of claim 47 wherein said tubular member, said wiping cap and said locking cap are created as a one-piece injection molded part.

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52. (NEW) The device of claim 50 wherein said hinges are attached to said tubular member at locations spaced 180 degrees from one another.
53. (NEW) The device of claim 47 wherein said wiping cap is fixed to said tubular member by fastening means selected from the group consisting of mechanical threads, press or snap fit.
54. (NEW) The device of claim 47 wherein said locking cap is hingedly secured to said wiping cap including means for releasably locking said locking cap and said wiping cap together when said caps are positioned over said open end of said tubular member.
55. (NEW) The device of claim 47 wherein said locking cap includes a top section engageable with a portion of said cup shaped member, said top section providing access into said wiper cap.
56. (NEW) The device of claim 47 wherein said locking cap and said wiping cap are coupled together by a flexible member.
57. (NEW) The device of claim 47 wherein said pipette tip has an inside cavity and said inside cavity is filled with a calibrated fluid sample.
58. (NEW) The device of claim 18 wherein said pipette tip has an inside cavity and said inside cavity is filled with a calibrated fluid sample.